

****NOT FOR PRINTED PUBLICATION****

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
LUFKIN DIVISION

AFFINITY LABS OF TEXAS, LLC,	§	
	§	
<i>Plaintiff,</i>	§	
	§	CIVIL ACTION No. 9:08CV164
v.	§	
	§	
BMW NORTH AMERICA, LLC, ET AL.,	§	JUDGE RON CLARK
	§	
<i>Defendants.</i>	§	
	§	

AFFINITY LABS OF TEXAS, LLC,	§	
	§	
<i>Plaintiff,</i>	§	
	§	CIVIL ACTION No. 9:08CV171
v.	§	
	§	
ALPINE ELECTRONICS OF AMERICA,	§	JUDGE RON CLARK
INC., ET AL.,	§	
	§	
<i>Defendants.</i>	§	
	§	

ORDER CONSTRUING CLAIM TERMS OF UNITED STATES PATENT NO. 7,634,228

Plaintiff Affinity Labs of Texas, LLC (“Affinity”) filed suit against Defendants BMW North America, LLC, *et al.* (Civil Action No. 9:08CV164) and Defendants Alpine Electronics of America, Inc., *et al.* (Civil Action No. 9:08CV171), claiming infringement of United States Patent No. 7,324,833 (“the ‘833 patent”). The court conducted a joint *Markman* hearing for these

two cases,¹ and on December 18, 2009 issued an order construing the claims of the ‘833 patent. [See 9:08CV164, Doc. #326 (“‘833 Cl. Constr. Order”); 9:08CV171, Doc. #174 (same).] On December 14, 2009, the court granted Plaintiff’s motions to amend its complaint in each of these two cases to add United States Patent No. 7,634,228 (“the ‘228 patent”) to each suit. [See 9:08CV164, Doc. #306 & Dec. 14, 2009 Oral Order; 9:08CV171, Docs. #167 & #171.] On April 1, 2010, the court conducted a second joint *Markman* hearing for these two cases to assist in interpreting the meaning of the disputed claim terms in the ‘228 patent.² Having carefully considered the patent, the parties’ contentions as presented in their briefs, and the arguments of counsel, the court now makes the following findings and construes the disputed claim terms in the ‘228 patent.³

¹ These two related cases remain as separate actions on the court’s docket, and will be tried independently. However, because they involve the same patent, and the accused products in each case involve related technologies, the court conducted one claim construction hearing for both cases. The parties did not object to conducting a joint *Markman* hearing. [See 9:08CV164, Doc. #196, Tr. of Case Mgmt. Conference at p. 66, l. 11 to p. 68, l. 15.]

² The transcript of the April 1, 2010 *Markman* hearing contains a number of representations by and agreements of the parties, as well as answers by their experts to technical questions from the court, all of which will not be repeated here, but which may assist in understanding the issues presented. This order governs in the event of any conflict between the order and the court’s preliminary analysis at the hearing. Court’s Exhibit Nos. 1-5, 5a, 7, 7a, 7b, and 8-10 were discussed at the hearing and are part of the record as [9:08CV164, Doc. #373-1] and [9:08CV171, Doc. #195-1]. These exhibits will be cited in this order as “Ct.’s Ex. No. ____.” The transcript of the April 1, 2010 claim construction hearing is found at [9:08CV164, Doc. #384], and will be cited in this order as “Tr. at p. ____, l. ____.”

³ To become familiar with the technology underlying the patents-in-suit from the perspective of one skilled in the art, and to better understand the technical aspects of the parties’ arguments, the court appointed Dr. Frank Shipman as technical advisor. [See 9:08CV164, Docs. #213 & 220; 9:08CV171, Docs. #124 & 125.] Dr. Shipman received his Ph.D. in computer science from the University of Colorado in 1993, his M.S. in computer science from the University of Colorado in 1990, and his B.S. in Electrical Engineering from Rice University in 1988. He is currently a professor at Texas A&M University, where he has been on the faculty since 1995. His research interests include intelligent user interfaces, hypertext, computers and

I. CLAIM CONSTRUCTION STANDARD OF REVIEW

Claim construction is a matter of law. *Markman v. Westview Instruments, Inc.* (*Markman II*), 517 U.S. 370, 388-91, 116 S. Ct. 1384, 1395-96 (1996); *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1456 (Fed. Cir. 1998). “The duty of the trial judge is to determine the meaning of the claims at issue, and to instruct the jury accordingly.” *Exxon Chem. Patents, Inc. v. Lubrizol Corp.*, 64 F.3d 1553, 1555 (Fed. Cir. 1995), *cert. denied*, 518 U.S. 1020, 116 S. Ct. 2554 (1996). “[T]he claims of a patent define the invention to which the patentee is entitled the right to exclude.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (*en banc*) (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)), *cert. denied*, 546 U.S. 1170, 126 S. Ct. 1332 (2006). “Because the patentee is required to ‘define precisely what his invention is,’ . . . it is ‘unjust to the public, as well as an evasion of the law, to construe it in a manner different from the plain import of its terms.’” *Id.* (quoting *White v. Dunbar*, 119 U.S. 47, 52, 7 S. Ct. 72, 75 (1886)).

The words of a claim are generally given their ordinary and customary meaning. *Id.* “[T]he ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention.” *Id.* at 1313. Analyzing how a person of ordinary skill in the art understands a claim term is the starting point of claim interpretation. *Id.* A person of ordinary skill in the art is “deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the

education, multimedia, new media, computers and design, computer-human interaction, and computer-supported cooperative work. His research has resulted in more than 100 refereed publications, including two Association for Computing Machinery best paper awards. Dr. Shipman’s curriculum vitae can be found at <http://www.csd.tamu.edu/~shipman/vitae.pdf>.

context of the entire patent, including the specification.” *Id.* Where a claim term has a particular meaning in the field of the art, the court looks to ““those sources available to the public to show what a person of skill in the art would have understood [the] disputed claim language to mean.”” *Id.* at 1314 (quoting *Innova*, 381 F.3d at 1116). Those sources include ““the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art.”” *Id.* (quoting *Innova*, 381 F.3d at 1116).

The intrinsic evidence, that is, the patent’s specification and, if in evidence, the prosecution history, is important in claim construction. *See id.* at 1315-17. “[T]he specification ‘is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.’” *Id.* at 1315 (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)). The patent specification and the prosecution history may clarify the definition of terms used in the claims, or may show that the patentee has clearly disavowed the ordinary meaning of a term in favor of some special meaning. *See Markman v. Westview Instruments, Inc. (Markman I)*, 52 F.3d 967, 979-80 (Fed. Cir. 1995), *aff’d*, 517 U.S. 370, 116 S. Ct. 1384 (1996). A claim term takes on its ordinary and accustomed meaning unless the patentee demonstrated an express intent to impart a novel meaning by redefining the term “with reasonable clarity, deliberateness, and precision” in the patent specification or prosecution history. *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002). The patentee may demonstrate an intent to deviate from the ordinary meaning “by redefining the term or by characterizing the invention in the intrinsic record using words or expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope.”

Id. at 1327. If the patentee clearly intended to provide his own definitions for claim terms, the “inventor’s lexicography governs.” *Phillips*, 415 F.3d at 1316.

In addition to the intrinsic evidence, a court is also authorized to review extrinsic evidence, such as dictionaries, inventor testimony, and learned treatises. *Id.* at 1317. For instance, in some cases “the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction . . . involves little more than the application of the widely accepted meaning of commonly understood words”; a general purpose dictionary may be helpful in these instances. *Id.* at 1314. However, extrinsic evidence is “in general less reliable” than the intrinsic evidence in determining how to read claim terms. *Id.* at 1318. Therefore, while extrinsic evidence may be used to help educate the court regarding the field of the invention and what a person of ordinary skill in the art would understand claim terms to mean, extrinsic evidence should be considered in the context of the intrinsic evidence in order to result in a reliable interpretation of claim scope. *Id.* at 1319.

II. PATENT BACKGROUND AND TECHNOLOGY

The patents-in-suit share the same specification and are both continuations of U.S. Patent No. 7,187,947 (“the ‘947 patent”). They are directed toward a system and method for connecting and integrating a portable electronic device, such as a standalone MP3 player device,⁴ with a

⁴ The court notes at the outset that the phrase “MP3 player” can mean either a piece of software that decodes or plays MP3 files, or a standalone electronic device that plays MP3 files. See Steven M. Kaplan, *Wiley Electrical and Electronics Engineering Dictionary* 485 (2004) [hereinafter *Wiley EE Dictionary*] (“MP3 player” means either “[a]n application which plays MP3 files” or “a device, such as a palm-sized digital audio player, which plays MP3 files”). This distinction is of import in the construction of the disputed terms relating to the “playing” of a media file or an audio file. See *infra* Part V.3.

second electronic device, such as a car's sound system.⁵ The portable electronic device communicates "metadata"—i.e., information about a particular data set that may describe how, when, and by whom the data set was created, accessed, or modified; its size; and how it was formatted—to the second electronic device. This metadata may include information about song, artist, album, and playlist names. The metadata is used by the second electronic device to create a graphical user interface that is shown on the second device's display. The second electronic device can then be used to select and play audio and media files stored on the portable electronic device, using "soft buttons" on the graphical user interface.

III. PERSON OF ORDINARY SKILL IN THE ART

As defined in this court's previous order construing the claims of the '833 patent [*see* '833 Cl. Constr. Order at 5-6], a person of ordinary skill in the art is an individual with the equivalent of a four-year degree from an accredited institution (usually denoted in this country as a B.S. or Bachelor's degree) in Electrical Engineering (EE), Mechanical Engineering (ME), or Computer Science (CS, with at least two semesters of coursework in EE and/or ME), together with at least two years of experience working with, developing, or designing electronic devices with user interfaces. Advanced education in EE, ME, or CS might substitute for some of the

⁵ Many of the patent claims refer to a "portable electronic device" or a "portable hand-held device" that may communicate information to a "different electronic device" or another "electronic device." As agreed by the parties, "portable electronic device," "PED," "portable hand-held device," and "first electronic device" were used interchangeably at the claim construction hearing. [*See* Tr. at p. 8, l. 18 to p. 12, l. 7.] The court will continue to refer to the "portable" or "hand-held" electronic device as the "PED" or "first device" throughout this order. Likewise, the court will refer to the "different electronic device" or the other electronic device to which the PED communicates information as the "second device." Claim 16 of the '228 patent refers to a "sound system," and the court may also refer to this "sound system" as the "second," "different," or "other" electronic device.

experience, while extensive experience in working with, developing, or designing electronic devices with user interfaces might substitute for some of the educational requirements. The parties do not object to this definition of a person of ordinary skill in the art. [*See* Tr. at p. 7, l. 12 to p. 8, l. 17 (discussing Ct.'s Ex. No. 1).]

IV. DISPUTED CLAIM TERMS IN THE '228 PATENT

The disputed claim terms are found in claims 1, 16, or 22 of the '228 patent. These claims are set out below, with the disputed terms in bold.

1. A media managing method comprising:

storing a media file in a memory system of a portable hand-held device that is not a conventional personal computer or a laptop computer, wherein the portable hand-held device further has a display and a processor;

storing a collection of information about the media file in the memory system, wherein the collection includes data representing a **name** for the media file;

communicating at least some of the collection from the portable hand-held device to a different electronic device in order to allow a user to view a **soft button** comprising the name on an associated display of the different electronic device; and

thereafter receiving a signal in the portable hand-held device to begin **playing the media file** by the portable hand-held device in response to a selection of the soft button at the different electronic device; and

outputting a played version of the media file across a physical interface of the portable hand-held device while the media file remains stored on the portable hand-held device, wherein the physical interface is configured to facilitate a communicative coupling of the portable hand-held device and the different electronic device, further wherein the physical interface is not circular and has a width dimension and a length dimension that is longer than the width dimension.

U.S. Patent No. 7,634,228, col. 18, ll. 7-32 (filed Mar. 2, 2007).

16. A media playing method comprising:

recognizing that a **portable electronic device** is coupled to a sound system that has an associated display and a user interface mechanism, wherein the portable electronic device is a hand-held device having a display, a memory, and a processor, and that is not a conventional personal computer or laptop computer, further wherein the portable electronic device is **configured to** save a media file in the memory of the portable electronic device, **to associate the media file with a name**, to store additional data that represents the name, to include the name in a menu of available content, to present the name on the display of the portable electronic device as a selectable icon, and to **communicate a collection of information representing the name to the sound system**;

receiving the collection of information in the sound system;

utilizing the collection of information to present a **soft button** on the associated display;

recognizing an interaction with the user interface mechanism as a selection of the soft button; and

requesting **a playing of the media file by the portable electronic device** in connection with the selection of the soft button so that **the playing of the media file** can be output via the sound system while the media file remains stored on the portable electronic device, wherein the receiving and requesting involve communicating across a physical interface that has multiple conductive elements and a contacting portion for the multiple conductive elements that is non-circular and configured to releasably couple with the portable electronic device.

‘228 patent, col. 19, l. 42 to col. 20, l. 5.

22. An audio system comprising:

an electronic device having a non-circular portable device interface that allows for communication of data and power;

the non-circular portable device interface configured to provide at least a portion of a link between the electronic device and a **portable electronic device** that has a memory, a processor, a display, and software saved at the portable electronic device, the software **configured to** direct the portable electronic device to save an audio file in the memory, to save a **name** of the audio file in the memory, **to associate the audio file with the name**, to include the

name in a menu of available content, and to **communicate a collection of information comprising the name to the electronic device**; and

the electronic device configured to utilize the collection of information to present a **soft button** on a display associated with the electronic device and to allow a user: (1) to interact with a user interface device communicatively coupled to the electronic device to navigate through at least at least [sic] a portion of content saved in the memory of the portable electronic device; (2) to view at least a partial representation of the menu on the display associated with the electronic device; and (3) to choose the audio file for processing by using the user interface device to select a soft button representation of the name displayed on the associated display so that responsive to the selection **the audio file can be played by the portable electronic device** and to be output via the electronic device while the audio file remains stored on the portable electronic device.

‘228 patent, col. 20, ll. 21-51.

V. CLAIM CONSTRUCTION

One or more of the parties stated in briefing or at the hearing that the meaning of certain claim terms does not require construction. Although the court need not construe terms with ordinary meanings, when the parties raise an actual dispute regarding the proper scope of the claims, the court must resolve that dispute. *O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1360 (Fed. Cir. 2008). An assertion that a claim term “needs no construction” may be inadequate when reliance on a term’s “ordinary” meaning does not resolve the parties’ dispute. *Id.* at 1361. Therefore, the court has construed certain of the terms for which some of the parties indicated no construction is necessary.

1. Terms previously construed.

- a. **“Soft buttons.” ‘228 patent, claims 1, 16, and 22; ‘833 patent claims 1, 17, and 28.**
- b. **“Name.” ‘228 patent, claims 1, 16, and 22; ‘833 patent claims 17 and 28.**
- c. **“Portable electronic device.” ‘228 patent, claims 16 and 22; ‘833 patent, claims 1, 17, and 28.**
- d. **“Configured to . . . communicate a collection of information representing the name to the sound system.” ‘228 patent, claim 16.**
- e. **“Configured to . . . communicate a collection of information comprising the name to the electronic device.” ‘228 patent, claim 22.**

The parties agree, and the court concludes, that certain terms appearing in both the ‘833 patent and the ‘228 patent should be construed consistently across both patents. [See Tr. at p. 12, l. 8 to p. 14, l. 10 (agreeing to definitions of “soft buttons” on Ct.’s Ex. No. 2 and “portable electronic device” on Ct.’s Ex. No. 4); *id.* at p. 14, l. 10 to p. 17, l. 13 (discussing definitions of “configured to . . . communicate . . .” phrases on Ct.’s Ex. Nos. 5 and 5a, and agreeing to definitions on Ct.’s Ex. No. 5); *id.* at p. 17, l. 21 to p. 18, l. 12 (agreeing to definition of “name” on Ct.’s Ex. No. 3).] Therefore, the following terms that were previously construed by the court for the ‘833 patent will be construed as follows for the ‘228 patent:

- 1a. **“Soft buttons” means “software-rendered graphics that a user can select by pushing the screen display or by pushing an associated physical button.”**
- 1b. **“Name” means “a word or group of words that identifies an audio file, a group of audio files, or a media file.”**
- 1c. **“Portable electronic device” means “an electronic device that can be easily moved by a user from one location to another and that can be operated in a mobile environment independent of, or untethered to, another system.”**
- 1d. **“Configured to . . . communicate a collection of information representing the name to the sound system” means “able to send at least the information necessary for the sound system to display the name.”**

- 1e. **“Configured to . . . communicate a collection of information comprising the name to the electronic device” means “able to send at least the information necessary for the electronic device to display the name.”**

[See ‘833 Cl. Constr. Order at 17-18 (construing “soft buttons”); *id.* at 23, 25 (construing “name”); *id.* at 28-31 (construing “portable electronic device”); *id.* at 15-17 (construing “configured to communicate . . .” phrases).]

2. “To associate” terms.

- a. **“To associate the media file with a name.” ‘228 patent, claim 16.**

- b. **“To associate the audio file with the name.” ‘228 patent, claim 22.**

The court previously held that in the ‘833 patent, “to associate the audio file with a name” means “to recognize an existing connection or to establish a connection between the electronic data representing the audio file and the electronic data representing the name.”

[See ‘833 Cl. Constr. Order at 23-25.] All parties agree that because the ‘833 patent and the ‘228 patent share the same specification, the “to associate” terms should be construed consistently across both patents. [See Tr. at p. 18, l. 13 to p. 19, l. 21.] Defendant Mercedes-Benz USA, LLC (“Mercedes”) proposes that “to associate” means “to establish a connection” but does not include “to recognize an existing connection,” and suggests that the court reconsider its previous construction. [See 9:08CV164, Doc. #362, Defs.’ Cl. Constr. Br. at 17-20.]

a. ‘228 Patent Claims

Mercedes asserts that the claim language of the patents-in-suit does not support a construction of “to associate” that includes recognizing prior connections, arguing that “the language and structure of claims 16 and 22 make clear that the *portable electronic device* must have the capability to associate a file (either audio or media) with a particular name, and thus the

act of association is focused on the portable electronic device.” [See Doc. #362 at 18-19 (emphasis in original).] The court agrees that the PED must be configured to perform the act of association. *See, e.g.*, ‘228 patent, col. 19, ll. 48-51 (“the portable electronic device is configured to . . . associate the media file with a name”). However, the mere fact that association takes place at the PED does not mean that the act of association could not be the act of recognizing an existing connection between an audio file or a media file⁶ and a name.

Mercedes argues that the difference in language between claims 17 and 28 of the ‘833 patent and claims 16 and 22 of the ‘228 patent, which use the infinitive verb form “to associate,” as compared to claim 1 of the ‘833 patent and claim 9 of the ‘228 patent, which describe the situation in which the name is already “associated with” the audio or media file, indicates that “to associate” should be construed as requiring the PED, or software at the PED, to create a connection between the audio or media file and the name. [See Doc. #362 at 18; Tr. at p. 21, l. 7 to p. 22, l. 12; *id.* at p. 31, l. 13 to p. 35, l. 9.] However, the fact that a claim such as claim 9 of the ‘228 patent describes a situation in which the name is already “associated with” the media file when the media file is received at the PED does not necessarily mean that such a situation is excluded from the scope of the other claims of the patents-in-suit.

⁶ The ‘228 patent specification speaks only in terms of “audio files” and does not discuss “media files.” However, the claims of the ‘228 patent make clear that a media file could include such things as an audio file, a voicemail message, or a video file. *See* ‘228 patent, col. 19, ll. 19-20 (“wherein the media file is an audio file”); *id.*, col. 19, ll. 21-22 (“wherein the media file is a voicemail message”); *id.*, col. 19, ll. 40-41 (“wherein the media file comprises a video file”); *id.*, col. 20, ll. 15-16 (“wherein the media file comprises a video file”); *CIAS, Inc. v. Alliance Gaming Corp.*, 504 F.3d 1356, 1360 (Fed. Cir. 2007) (“comprising” means “including but not limited to”).

Further, claim 16 of the ‘228 patent, which claims a media playing method wherein the PED is “configured . . . to associate” a media file with a name, contains an additional limitation that is not present in the other “to associate” claims. Claim 16 states that the PED is configured “to associate the media file with a name,” and also “to store additional data that represents the name.” ‘228 patent, col. 19, ll. 49-52. Claim 22 of the ‘228 patent and claims 17 and 28 of the ‘833 patent do not claim a system in which the PED “store[s] additional data that represents the name.” Presumably, in claim 16, when the PED stores additional data that represents the name, it does not do so without also associating this data with the media file, for instance by storing the additional data in the file’s ID3 tag.⁷

Thus, in the context of claim 16, the PED must have the capability to create a connection between the media file and the additional data that represents the name. But the other “to associate” claims do not contain the same limitation, indicating that in these claims, the PED need not necessarily have the capability to add or edit information in ID3 tags. Instead, the PED might simply have the capability to “associate” an audio file with a name by reading the name from an existing ID3 tag or otherwise recognizing an existing connection between the audio or media file and the name. The court has found nothing in the intrinsic evidence that would indicate that recognition of an existing connection should be excluded from the definition of “to associate” with respect to claim 22 of the ‘228 patent or claims 17 and 18 of the ‘833 patent. *See Callicrate v. Wadsworth Mfg., Inc.*, 427 F.3d 1361, 1371-72 (Fed. Cir. 2005) (claim terms should be interpreted consistently throughout various claims of the same patent); *Rexnord Corp. v.*

⁷ An “ID3 tag” is a means for storing metadata related to the audio track within an MP3 file. *See infra* Part V.2.c below.

Laitram Corp., 274 F.3d 1336, 1342 (Fed. Cir. 2001) (“[A] claim term should be construed consistently with its appearance in . . . other claims of the same patent.”).

b. Other Intrinsic Evidence

The ‘228 patent specification mentions in several places that information or data can be “associated with” an audio file or with audio information. *See, e.g.*, ‘228 patent, col. 2, ll. 53-58 (noting that “audio information” may include songs, and describing how “information or data associated with the selected audio information” may be wirelessly communicated); *id.*, col. 3, ll. 40-42, 48-50 (noting that “digital engine **101**” can maintain “a plurality of different types of information or data associated with the selected audio information,” and that the information associated with the audio information could be an audio file such as an MP3 file). However, the specification and intrinsic evidence do not provide further guidance regarding how an electronic device “associates” information with files, or regarding what a person of ordinary skill in the art would understand “to associate” to mean, i.e. whether an artisan of ordinary skill would understand “to associate” to encompass both the creation of a connection and the recognition of a preexisting connection, or would understand “to associate” to be limited to the creation of a connection. Extrinsic sources shed light on the technology at issue.

c. Extrinsic Evidence

The ‘228 patent specification indicates that an “audio file” may include such things as an MP3 file or a WAVE file. *See, e.g.*, ‘228 patent, col. 6, ll. 33-34 (“an audio file such as a wave file, and [sic] MP3 file, etc.”). The manner in which electronic devices store data relating to an audio track within an MP3 file is instructive regarding the meaning of “to associate.” Every MP3 file has the ability to store metadata related to the audio track within the file in the form of what

are known as “ID3 tags.” Scot Hacker, *MP3: The Definitive Guide* 116 (1st ed. 2000). An ID3 tag may store such things as the song name, artist, album, year, genre, etc. *Id.* This understanding is consistent with how “audio information” and “information associated with audio information” are described in the ‘228 patent specification. *See, e.g.*, col. 3, ll. 40-42 (information associated with selected audio information “could be several songs or titles configured as an audio file and formatted in a digital format such as an MP3 file”). ID3 tag information can be included in an MP3 file at the time it is created, or it can be added later. Hacker, *supra*, at 116.

So, the act of “associating” an audio file with a name could mean “to establish a connection” by creating an ID3 tag or by adding the name into an already existing ID3 tag. *See id.* (“[S]ome MP3 players include the ability to edit . . . ID3 tag information . . .”). Or, the act of “associating” could mean “to recognize an existing connection” by reading the name that already exists in an ID3 tag and then storing this recognized connection for later use, for instance by creating a database of ID3 tags or song names in order to provide faster access to the recognized connections when, for instance, the PED generates a user interface. *See id.* (“Many MP3 players have the ability to read ID3 data out of your files, and to display this information in the MP3 playback interface.”). The court finds that one of ordinary skill in the art at the time of the invention would understand “to associate” to encompass both of these possibilities, and thus finds that the ordinary meaning of “to associate” to an artisan of ordinary skill would include both “to establish a connection” and “to recognize an existing connection” between an audio or media file and a name.

d. Conclusion

Unless compelled to do otherwise, the court should give a claim term the full range of its ordinary meaning as understood by an artisan of ordinary skill. *Rexnord*, 274 F.3d at 1342.

Because the court has found nothing in the intrinsic evidence that would compel a construction of “to associate” that gives the term less than the full range of its ordinary meaning, the court construes the “to associate” terms in the ‘228 patent as follows:

2a. **“To associate the media file with a name” means “to recognize an existing connection or to establish a connection between the electronic data representing the media file and the electronic data representing the name.”**

2b. **“To associate the audio file with the name” means “to recognize an existing connection or to establish a connection between the electronic data representing the audio file and the electronic data representing the name.”**

3. “Playing” terms.

a. **“Playing the media file.” ‘228 patent, claim 1.**

b. **“A playing of the media file by the portable electronic device.” ‘228 patent, claim 16.**

c. **“The audio file can be played by the portable electronic device.” ‘228 patent, claim 22.**

d. **“Outputting a played version of the media file.” ‘228 patent, claim 1.**

e. **“The playing of the media file.” ‘228 patent, claim 16.**

The Hyundai/Kia Defendants⁸ and JVC/Kenwood Defendants⁹ propose that “playing the media file” means “processing the media file into a signal that is audible when applied to a

⁸ “Hyundai/Kia Defendants” refers to Defendants Hyundai Motor America, Inc., Hyundai Motor Manufacturing Alabama LLC, and Kia Motors America, Inc.

⁹ “JVC/Kenwood Defendants” refers to Defendants JVC Americas Corp. and Kenwood USA Corporation.

speaker and/or visible when applied to a display.” [See Doc. #362 at 3.] After discussion at the *Markman* hearing, Plaintiff Affinity and the remaining defendants agreed that “playing the media file” means “processing data in the media file into an electronic signal that the different electronic device uses to produce sound and/or visual images.” [See Tr. at p. 69, l. 24 to p. 71, l. 14; *id.* at p. 78, l. 25 to p. 79, l. 11 (discussing Ct.’s Ex. No. 7a).] The Hyundai/Kia and JVC/Kenwood Defendants object to this construction [see Tr. at p. 79, ll. 19-20], arguing that with respect to audio files, the “electronic signal” that results from processing data in the file must be an *analog* signal [see Tr. at p. 56, ll. 9-12; *id.* at p. 113, l. 9 to p. 114, l. 23]. Plaintiff Affinity disagrees, arguing that the signal could be either an analog or a digital signal. [See Tr. at p. 71, l. 25 to p. 72, l. 2; *id.* at p. 72, ll. 15-16.]

a. ‘228 Patent Claims

The ‘228 patent claims describe a method or system wherein an audio or media file is “played” by the PED, and the PED sends a “played version” of the file to the other electronic device, which can then “output” the played version via, for instance, a sound system. See ‘228 patent, col. 18, ll. 21-29 (describing “playing the media file by the portable hand-held device” and “outputting a played version of the media file across a physical interface of the portable hand-held device . . . wherein the physical interface is configured to facilitate a communicative coupling of the portable hand-held device and the different electronic device”); *id.*, col. 19, ll. 63-66 (describing “a playing of the media file by the portable electronic device . . . so that the playing of the media file can be output via the sound system”); *id.*, col. 20, ll. 48-50 (“the audio file can be played by the portable electronic device and . . . output via the [other] electronic device”). Thus, the act of “playing” takes place at the PED, and the different electronic device

then uses the “played version” or “the playing of the media file” to emit audible sounds or display visible images.

The audio or media file itself remains stored on the PED throughout the “playing” process. *See* ‘228 patent, col. 18, ll. 24-27 (“the media file remains stored on the portable hand-held device” while the “played version” is sent to the different electronic device); *id.*, col. 19, ll. 65-67 (“the media file remains stored on the portable electronic device” while “the playing of the media file” is output via the sound system); *id.*, col. 20, ll. 48-51 (“the audio file remains stored on the portable electronic device” while the other electronic device outputs the played audio file). The parties agree that the “sound system” or the “different electronic device” may include such things as a receiver or an amplifier, and that the user can make adjustments to volume, bass, treble, etc. at the second electronic device. [*See* Tr. at p. 59, l. 14 to p. 61, l. 10.]

b. Other Intrinsic Evidence

The ‘228 patent specification indicates that, with respect to audio files, “playing” involves processing audio information into an “audio signal.” *See* ‘228 patent, col. 7, l. 65 to col. 8, l. 2 (“In one embodiment, electronic device **300** may be operable as an *audio player* configured to play digital representations of music. For example, electronic device **300** may also include an *MP3 player operable to process the received audio information into an audio signal.*” (emphasis added)). The parties do not disagree that “playing” means processing or converting an audio file into an “audio signal” [*see* Doc. #362 at 6-8; Doc. #363, Pl.’s Resp. to Defs.’ Cl.

Constr. Br. at 2-4]; however, they disagree as to whether this “audio signal” must be an analog signal, or whether it could also include a digital signal of some sort.¹⁰

References cited in the prosecution history provide some guidance as to what steps are involved in converting a stored audio file into audible sounds. For instance, during the prosecution of the ‘947 patent,¹¹ the examiner cited U.S. Patent No. 6,721,710 to Lueck (“the ‘710 patent”). [See Doc. #362 Ex. N, Nov. 21, 2005 Office Action at 7.] The ‘710 patent discloses a “hardware platform . . . for playing digital audio files . . . [that] may be in various compressed and/or encoded formats.” U.S. Patent No. 6,721,710, col. 2, ll. 64-68 (filed Oct. 17, 2000). This platform includes a flash memory in which audio files are stored. *See* ‘710

¹⁰ The Hyundai/Kia and JVC/Kenwood Defendants note [see Doc. #362 at 6-7] that, in its claim construction brief for the ‘833 patent, Plaintiff Affinity stated that claims 17 and 28 of the ‘833 patent describe a system wherein a user can “select an audio file to be converted into an audible signal,” and that this conversion “can be accomplished by converting the digital file into an analog signal that can be outputted through speakers connected to the claimed audio system” [see 9:08CV264, Doc. #264, Pl.’s ‘833 Cl. Constr. Br. at 23]. However, Affinity did not argue in its previous brief that complete conversion of an audio file into an analog signal must always take place entirely at the PED. Further, as the Hyundai/Kia and JVC/Kenwood Defendants correctly note [see Doc. #362 at 7], the dispute with respect to the ‘833 patent was not over the construction of “playing,” but rather over whether “processing” of an audio file was limited to “playing,” or could encompass other types of processing such as storing, deleting, replaying, copying, etc. [See Doc. #264 at 22-25 (arguing that “to select an available audio file for processing” means “to select an available audio file for converting into an audio signal”).] Thus, these prior statements by Affinity do not foreclose the possibility that in some cases the PED might “process” a digital file into a digital signal that is then sent to the second electronic device for further processing into an analog signal that can be output through speakers.

¹¹ The ‘228 patent is a continuation of the ‘947 patent, which also contains claims directed toward the playing of media files. *See, e.g.*, U.S. Patent No. 7,187,947, col. 20, ll. 40-41 (filed Mar. 28, 2000) (describing a device “comprising a media player configured to play user selected media”). When there is similarity between the claims of the patents-in-suit and the claims of a parent application, the prosecution history of the parent application may be “highly instructive.” *See Andersen Corp. v. Fiber Composites, LLC*, 474 F.3d 1361, 1368 (Fed. Cir. 2007).

patent, col. 3, ll. 49-53. It also includes a digital signal processor (“DSP”) that may be loaded with a decoder program for decoding the type of audio format of the audio file desired to be played. *See* ‘710 patent, col. 3, ll. 62-65.

The DSP decodes stored audio files and “provides an audio bit stream to a stereo digital-to-analog converter (DAC) [that] converts the digital signals [from the DSP] to an analog equivalent.” ‘710 patent, col. 3, ll. 3-5; *id.*, col. 3, ll. 29-31. The analog signal produced by the DAC is then provided “to an output device such as speakers, a set of earphones, or some other device for converting the electrical signal to an audible signal.” ‘710 patent, col. 3, ll. 33-35. Thus, in the ‘710 patent, an audio file is first converted into a digital signal by the DSP, then converted into an analog signal by the DAC, then sent to a set of speakers that output audible sounds.¹²

Similarly, a reference cited by the applicants during prosecution of the ‘228 patent, U.S. Pub. No. US 2005/0054379 A1 to Cao, et al., discloses a cordless telephone that allows a user to

¹² The Hyundai/Kia and JVC/Kenwood Defendants note that, in response to the examiner’s office action, the applicants stated that the ‘710 patent “provides a method for converting audio formats to a single audio format prior to playing the audio format.” [Doc. #362 Ex. O, May 22, 2006 Reply to Non-Final Office Action at 12.] This statement could indicate that the applicants believed that “playing” an “audio format” involves something different, or something more, than simply “converting” the audio format. However, the applicants were merely trying to distinguish a claim that had been rejected by the examiner, which described “a player operable to play multiple audio formats,” from the ‘710 patent, which the applicants asserted did not disclose or suggest a processor operable to play plural audio formats. This statement by the applicants does not amount to a clear and unambiguous disclaimer of the possibility that the “played version” of an audio file as described by the ‘228 patent could be a digital signal produced by a DSP after it decodes the audio file. *See Abbott Labs. v. Sandoz, Inc.*, 566 F.3d 1282, 1289 (Fed. Cir. 2009) (owing to the “inherent ambiguities” of prosecution history, doctrine of prosecution disclaimer only applies to “unambiguous disavowals” of claim scope); *Elbex Video, Ltd. v. Sensormatic Elecs. Corp.*, 508 F.3d 1366, 1371-72 (Fed. Cir. 2007) (prosecution disclaimer applies only where alleged disavowal of claim scope is “clear and unmistakable” to one of ordinary skill in the art).

“play a digitized musical audio stream (e.g., MP3 digital audio stream).” [Doc. #362 Ex. S, Cao at ¶ 0019.] In this reference, the playing is accomplished by reading an MP3 digital audio bit stream stored in flash memory to a DSP that decodes the MP3 digital audio bit stream; after decoding by the DSP, the bit stream is converted into an analog signal using a DAC. [See Cao at ¶ 0055.] Thus, as in the ‘710 patent, an audio file or an “audio bit stream” is first “decoded” by a DSP, and then converted into an analog signal by a DAC.

These references indicate that before a digital signal can be emitted as audible sounds by a set of speakers or headphones, it must first be converted into an analog signal by a DAC. However, the prosecution history does not provide guidance as to whether a person of ordinary skill in the art would understand that the “audio signal” described in the ‘228 patent specification, i.e. the “played version” of a media file that is sent from the PED to the second electronic device, could be, for instance, the digital signal produced by a DSP when it decodes a media file, or whether, as the Hyundai/Kia and JVC/Kenwood Defendants argue, the “audio signal” must be an analog signal capable of being sent to a set of headphones or speakers. Extrinsic evidence provides guidance as to whether a person of ordinary skill in the art at the time of the invention would understand “audio signal” to encompass both digital and analog signals, or would understand “audio signal” to mean analog signals only.

c. Extrinsic Evidence

The Hyundai/Kia and JVC/Kenwood Defendants argue that the ordinary and customary meaning of “audio signal” is an analog signal [see Tr. at p. 85, ll. 22-23], pointing to dictionary definitions to support this argument, see, e.g., Rudolf F. Graf, *Modern Dictionary of Electronics* 44 (7th ed. 1999) (“audio signal” means “[a]n electric signal whose frequency is within the audio

range”); *McGraw-Hill Dictionary of Scientific and Technical Terms* 162 (6th ed. 2003) (“audio signal” means “[a]n electric signal having the frequency of a mechanical wave that can be detected as a sound by the human ear”). However, other extrinsic evidence indicates that by the year 2000, when the ‘228 patent’s parent application was filed, a person of ordinary skill in the art would have understood that an electronic device could “play” an audio file by sending a digital signal to a receiver or an amplifier. For instance, the Sony/Philips Digital Interconnect Format (“S/PDIF”) is an interface for transmitting digital audio signals between devices and stereo components over either optical or electrical cable. *See* 13 *Wiley Encyclopedia of Electrical and Electronics Engineering* 581-82 (John G. Webster ed., 1999) (describing various components of a multimedia audio system that “encompasses techniques of both analog and digital signal processing,” and noting that audio system components may include S/PDIF digital inputs and outputs); David Miles Huber, *The MIDI Manual: A Practical Guide to MIDI in the Project Studio* 159 (2d ed. 1999) (“The S/PDIF [interface] has been adopted for transmitting digital audio between consumer digital audio devices.”). By the year 2000, there were CD players available that sent audio signals via S/PDIF digital outputs. *See* Parasound Discontinued Products: C/DP-2000 Ultra Belt Drive CD Player, <http://www.parasound.com/vintage/cdp2000.php> (last visited May 5, 2010) (describing features of discontinued CD player, which included “[c]oaxial S/PDIF digital output”); Parasound Prods., Inc., *Parasound C/DP-2000 Ultra Belt Drive CD Player Owner’s Manual* 6 (1999) (noting that CD player is equipped with a digital output jack for coaxial digital connection to an external DAC), *available at* <http://www.parasound.com/pdfs/vintage/cdp2000om.pdf>.

Further, extrinsic evidence also indicates that one of skill in the art would understand that “MP3 player” can simply mean a piece of software that decodes compressed MP3 files. MP3 audio files are compressed audio files that are created by running uncompressed files through an MP3 “encoder”; the tool or software used to play an MP3 file is called a “decoder” or an “MP3 player.” *See* Hacker, *supra*, at 2. This understanding of what an “MP3 player” is is consistent with how that phrase is used in the ‘228 patent specification, which indicates that in one embodiment of the invention, an “MP3 player” is a part or component of an electronic device. *See* ‘228 patent, col. 7, l. 67 to col. 8, l. 4 (“[E]lectronic device **300** may also *include* an MP3 player operable to process the received information into an audio signal. [E]lectronic device **300** may be used to . . . play [MP3] files *using an MP3 player* when desired.” (emphasis added)); *cf.* Wiley *EE Dictionary*, *supra* note 4, at 485 (“MP3 player” means either “[a]n application which plays MP3 files” or “a device, such as a palm-sized digital audio player, which plays MP3 files”). In the year 2000, an MP3 playback device could be hooked up to a stereo either via analog ports, or through digital outputs to an “outboard” DAC. *See* Hacker, *supra*, at 210 (“[D]igital bits need to be converted into analog signal at some point in the chain. The question is whether this job is done by a . . . built-in DAC . . . or by a higher-quality DAC in a digitally equipped amplifier, DAT, or outboard DAC.”); *see also id.* at 212-14 (noting that digital input jacks became common on amplifiers sold in the late 1990s, further noting that it was possible to obtain an MP3 playback device with digital outputs, and describing various digital connection types including S/PDIF); *id.* at 234-35 (giving advice on how to choose the best “external MP3 player,” and noting that “if you have a digital amplifier or DAC, look for a unit with optional digital outputs”).

d. Conclusion

The court finds that a person of ordinary skill in the art at the time of the invention would understand that “playing” in the ‘228 patent means “processing data in a media file into an electronic signal,” and that this “electronic signal” is the “played version” or “the playing of the media file” that is sent from the PED to the second electronic device to be output as audible sounds or visible images.¹³ The court further finds that, with respect to audio files, a person of ordinary skill in the art would understand that an “audio signal” could be an analog signal suitable for output through speakers, or could be a digital signal that must be converted by a DAC before being output through speakers. This is particularly true of MP3 files, where one of skill in the art would understand that an “MP3 player” is a software application that “decodes” compressed MP3 files, the result of which could be a digital audio signal. *See Oatey Co. v. IPS Corp.*, 514 F.3d 1271, 1277 (Fed. Cir. 2008) (where claims can reasonably be interpreted to include a specific embodiment, it is incorrect to construe the claims to exclude that embodiment,

¹³ The Hyundai/Kia and JVC/Kenwood Defendants argued that this construction could encompass something as simple as “processing” an MP3 file into an MP3 file. [See Tr. at p. 80, ll. 9-16.] However, Plaintiff Affinity agrees that “playing” involves more than merely copying the audio or media file and sending it from the PED to the second electronic device. [See Tr. at p. 51, l. 22 to p. 52, l. 4; Tr. at p. 99, ll. 13-23.] Further, this construction does not encompass all types of “processing” of an audio or media file; it is limited to processing the audio or media file into an electronic signal that the second electronic device can use to produce sound or images. As discussed above, *see supra* Parts V.3.b. and V.3.c., with respect to an MP3 file, “playing” involves more than just creating a copy—it involves decoding the MP3 file into an uncompressed audio signal. Hyundai/Kia and JVC/Kenwood also argued that, with respect to WAVE files, the only possible “processing” that could be performed would be to convert the file into an analog signal, because WAVE files are stored in an uncompressed format. [See Tr. at p. 64, ll. 10-16.] However, a DSP is capable of doing many kinds of “processing” other than simply decoding a compressed file. *See* Ken C. Pohlmann, *Principles of Digital Audio* 484 (3d ed. 1995) (DSP can be used to “generate signals in the digital domain”); *id.* at 486 (DSP can perform processing such as sample rate conversion, error correction, volume/fader/balance, filtering, etc.).

absent probative evidence to the contrary); ‘228 patent, col. 7, l. 65 to col. 8, l. 4 (describing embodiment wherein an electronic device “includes an MP3 player”).

Unless compelled to do otherwise, the court should give a claim term the full range of its ordinary meaning as understood by an artisan of ordinary skill. *Rexnord*, 274 F.3d at 1342. The court has found nothing in the intrinsic evidence that would compel a construction of “audio signal” that gives the term less than the full range of its ordinary meaning encompassing both digital and analog signals. Therefore, the court construes the “playing” terms as follows:

- 3a. **“Playing the media file” means “processing data in the media file into an electronic signal that the different electronic device can use to produce sound and/or visual images.”**
- 3b. **“A playing of the media file by the portable electronic device” means “a processing of data in the media file into an electronic signal that the sound system can use to produce sound and/or visual images.”**
- 3c. **“The audio file can be played by the portable electronic device” means “the portable electronic device can process data in the audio file into an electronic signal that the other electronic device can use to produce sound.”**
- 3d. **“Outputting a played version of the media file” means “sending, by the portable hand-held device, the electronic signal that results from processing data in the media file.”**
- 3e. **“The playing of the media file” means “the electronic signal that is produced when data in the media file is processed by the portable electronic device.”**

Plaintiff Affinity, Defendant Mercedes, and the BMW Defendants¹⁴ agree to the above construction of “playing the media file.”¹⁵ [See Tr. at p. 76, ll. 14-17 (Plaintiff Affinity suggests

¹⁴ “BMW Defendants” refers to Defendants BMW North America, LLC and BMW Manufacturing Co. LLC.

¹⁵ The Hyundai/Kia Defendants, JVC/Kenwood Defendants, and Defendant Volkswagen Group of America, Inc. (“Volkswagen”) object to the change of “uses” on Court’s Exhibit No. 7a to “can use” in the above construction. [See Tr. at p. 121, ll. 9-15 (Defendant Volkswagen

changing “uses” on Ct.’s Ex. No. 7a to “can use”); *id.* at p. 121, ll. 4-7 (Defendant Mercedes agrees); *id.* at p. 121, ll. 18-22 (BMW Defendants agree).] Without waiving any objections as to substance, all parties agree to the format and structure of the above constructions of “a playing of the media file by the portable electronic device,” “the playing of the media file,” “outputting a played version of the media file,” and “the audio file can be played by the portable electronic device.” [See Tr. at p. 123, ll. 9-25 (discussing Ct.’s Ex. No. 8, Hyundai/Kia and JVC/Kenwood Defendants agree to structure of construction for “a playing of the media file by the portable electronic device” and “the playing of the media file”); *id.* at p. 124, l. 2 to p. 125, l. 13 (discussing Ct.’s Ex. No. 9, all parties agree to structure of construction for “outputting a played version of the media file”); *id.* at p. 125, l. 14 to p. 127, l. 6 (discussing Ct.’s Ex. No. 10, all parties agree to structure of construction for “the audio file can be played by the portable electronic device”).]

objects); *id.* at p. 122, l. 2 to p. 123, l. 6 (Hyundai/Kia and JVC/Kenwood Defendants object).] Under the court’s construction, the audio or media file is “played” once the PED has processed it into an electronic signal, and the second device is not necessarily required to actually emit sounds or images. If a user has “muted” the second device in order to focus on something else, an audio file may still be “played” by the PED without audible sounds being emitted by the second device. The court finds that this construction, i.e. “can use” instead of “uses,” is more consistent with the structure of the claims. For example, in claim 1 of the ‘228 patent, the portable hand-held device “plays the media file” and then sends a “played version” of the media file to the second device. Thus, “playing” is complete once the “played version,” i.e. an electronic signal, is produced, regardless of whether the second device ultimately uses that signal to emit audible sounds or visible images. See ‘228 patent, col. 18, ll. 21-29.

VI. CONCLUSION

The jury will be instructed in accordance with the court's interpretation of the disputed claim terms in the '228 patent.

So **ORDERED** and **SIGNED** this **10** day of **May, 2010**.

A handwritten signature in black ink, appearing to read "Ron Clark", is written above a horizontal line.

Ron Clark, United States District Judge